

RESPONSE TO OFFICE ACTION
DATED JUNE 4, 2007

Appln. No. 10/694,276

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Amendments to the Claims

This listing of claims will replace all prior versions and listing of claims in the application.

Listing of Claims

1 (currently amended). An lead-acid electric battery having a plurality of ~~aqueous-electrolyte~~ cells, said battery being connectable to a fluid water source for replenishing fluid water in said cells, said battery comprising:

a fluid water conduit ~~fixed~~ attached to said battery and capable of being connected in fluid communication with said fluid water source, said fluid water conduit being in fluid communication with each of said cells;

a valve system operatively associated with said fluid water conduit for controlling fluid water flow from said fluid water source, through said fluid water conduit and to said cells;

an electrolyte level sensor attached to at least one of said cells capable of generating an electronic signals indicative of an amount of electrolyte in at least one of said cells; and

an electronic controller attached to said battery and in communication with said electrolyte level sensor and said valve system, said controller controlling said valve system to allow fluid water to flow to said cells in response to a signals from said level sensor indicative of a deficient amount of electrolyte in said cells, and preventing fluid water flow to said cells in response ~~to a~~ signals from said level sensor indicative of a sufficient amount of electrolyte in said cells.

2 (currently amended). An electric battery according to Claim 1, wherein said valve system comprises:

a conduit valve positioned in said fluid water conduit to control fluid water flow from said fluid water source to said cells, said conduit valve being in

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communication with and under the control of said electronic controller for opening and closing thereof;

a plurality of cell valves, one of said cell valves being positioned in each of said cells for controlling ~~fluid~~ water flow from said ~~fluid~~ water conduit to each of said cells.

3 (currently amended). An electric battery according to Claim 2, wherein each of said cell valves comprises a valve member responsive to a level of ~~fluid~~ water in each said cell to effect opening of said cell valve when said amount of ~~fluid~~ water is less than a first predetermined amount, and closing of said cell valve when said amount of ~~fluid~~ water is greater than a second predetermined amount.

4 (currently amended). An electric battery according to Claim 2, wherein said electronic controller comprises a microprocessor.

5 (original). An electric battery according to Claim 4, wherein said conduit valve is electrically openable and closable by said microprocessor.

6 (currently amended). An electric battery according to Claim 1, wherein said ~~fluid~~ water source has a fitting connectable to said ~~fluid~~ water conduit through a coupling attached to said battery, said coupling comprising:

a biasing member positioned between said coupling and said fitting for ejecting said fitting away from and out of engagement with said coupling; and

a latch movable between a first position engaging and holding said fitting in engagement with said coupling against said biasing member, and a second position releasing said fitting from engagement with said coupling, said latch being actuated between said first and second positions by said electronic controller.

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7 (original). An electric battery according to Claim 6, wherein said latch is electrically actuatable between said positions.

8 (original). An electric battery according to Claim 6, wherein said latch comprises a sensor adapted to generate signals indicative of engagement and disengagement of said fitting with said coupling, said sensor being in communication with said controller.

Claims 9 and 10 (canceled).

11 (currently amended). An electric battery according to Claim 1, further including:

a charging sensor capable of generating an electronic signal indicating when said battery is being charged, said charging sensor being in communication with said controller; and

an air pump in fluid communication with said cells, said air pump being in communication with and controlled by said controller and pumping air into said cells to promote mixing of said fluid therein and thereby prevent acid stratification during charging.

12 (original). An electric battery according to Claim 11, wherein said charging sensor comprises a Hall Effect device mounted on said battery for measuring flow of electrical current to said battery indicative of charging.

13 (original). An electric battery according to Claim 11, wherein said charging sensor comprises an electrical shunt device mounted on said battery for measuring flow of electrical current to said battery indicative of charging.

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14 (original). An electric battery according to Claim 11, further comprising an air conduit fixed to said battery and extending to each of said cells, said air conduit providing fluid communication between said air pump and said cells.

Claims 15-31 (canceled).

32 (currently amended). A method of replenishing ~~fluid water~~ to cells of an lead-acid electric battery from a water source ~~having a liquid electrolyte~~, said method comprising the steps of:

providing a water conduit attached to said battery, said conduit being in fluid communication with each of said cells;

providing at least one electrolyte level sensor attached to at least one of said cells;

providing an electronic controller attached to said battery, said electronic controller being in communication with said electrolyte level sensor;

connecting said ~~water conduit~~ battery to a fluid ~~said water~~ source;

sensing when a level of said electrolyte in said ~~one cell~~ battery is low using said electrolyte level sensor; and

sending a signal from said electrolyte level sensor to said controller indicative of the level of said electrolyte in said one cell;

allowing ~~fluid water~~ to flow from said ~~water~~ fluid source to each of said cells through a said water conduit ~~fixed to said battery~~.

33 (currently amended). A method according to Claim 32, further comprising the steps of:

providing a valve system operatively associated with said water conduit for controlling water flow through said water conduit to said cells;

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sensing when a level of said electrolyte in said one cell battery is adequate using said electrolyte level sensor;
and

sending a signal from said electrolyte level sensor
to said controller indicative of the level of said electrolyte
in said one cell; and

halting flow of said fluid water to each of said
cells using said controller to control said valve system.